UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,542	12/02/2004	Osamu Ochino	Q85102	6989

23373 7590 03/20/2008

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER	
KNABLE, GEOFFREY L	
ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
03/20/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/516,542	OCHINO, OSAMU	
	Examiner	Art Unit	
	Geoffrey L. Knable	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 2-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The amendments to claim 14 clarify that the three belt layer forming methods all require extrusion of a band and spirally winding the band onto a rotating support. As such, method (1) has been read to require spirally winding an extruded band on a rotating support to form a coating rubber layer and laminating a plurality of steel cords on the wound coating rubber. Some ambiguity however remains with respect to methods (2) and (3). In particular, since both these methods require that the extruded coating rubber cover single or plural steel cords to form a small width band, which is spirally wound on a rotating support, they seem to substantially overlap one another, it therefore not being clear how they materially differ from one another. In particular, the only difference between the two methods would seem to be that method (3) describes that the small width band body is formed "during the tire shaping" and as such, method (2) is read to be entirely generic to method (3). Is this a correct reading of the scope of these methods? If not, clarification is required of the scope of these methods.

Further, because of previous arguments that the cords in apparently any of the methods could be applied at a desired inclination angle side by side (and because it is described in the remarks accompanying the current amendment that any of the described methods seemingly equally allows formation of a belt member without manual

labor), whereas formation methods (2) and (3) are read to require *spirally winding* a band including a cord/cords on a support (and thus are read to be directed (*and limited*) to forming what is typically called a spirally wound belt/band or cap ply (e.g. as in GB 1487426)), clarification/confirmation would be helpful that methods (2) and (3) are in fact limited to formation of a spirally wound belt/band/cap ply and thus *not* formation of normal angled (e.g. ± 21 degrees) belts. If this is not a correct interpretation, then clarification is required of why it is not.

Applicant is advised that, with respect to the term "tire shaping" in method (3), in view of applicant's arguments (page 7 of the latest response), this has been read as simply referring to any of the steps in the formation of the green tire.

3. Claims 6-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,487,426 to Bekaert taken in view of Sandstrom et al. (US 5,394,919) or Ravagnani et al. (US 4,239,663) and optionally further in view of Fischer (US 4,722,977) as applied in the last office action.

4. Claims 2-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,487,426 to Bekaert taken in view of EP 481080 to Nakagawa et al. and optionally further in view of Fischer (US 4,722,977) and (for claims 2 and 9-13 only) optionally further in view of at least one of [Sharma (US 4,615,369) and Vasseur (US 5,871,597)] as applied in the last office action.

5. Claims 3-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,487,426 to Bekaert taken in view of Grimberg et al. (US 2003/0221760) or

Uchino et al. (US 2002/0088522) and optionally further in view of Fischer (US 4,722,977) as applied in the last office action.

6. Applicant's arguments filed 11-26-2007 have been fully considered but they are not persuasive.

In view of applicant's response, however, the previous 35 USC 112 first paragraph rejection has been withdrawn. Many of the previous 35 USC 112, second paragraph ambiguities have likewise been clarified and these rejections withdrawn - note however the remaining ambiguities as detailed above.

As to the prior art rejections, it is first stressed that the claimed method allows formation of belt layers without manual labor. GB '426 however discloses a belt formation method entirely consistent with method (2) and/or (3) and therefore would posses the same advantages attributable to the claimed method in this regard.

It is then argued that

> "[t]o make up for the deficiencies of the prior art, the Examiner relies on Fischer. Fischer discloses a process and composition for viscosity degradation of diene rubbers. Specifically, in column 1, lines 7-26, Fischer generally states that in the manufacture of vulcanized rubber products, diene rubbers, especially natural rubber, has to be reduced in molecular weight to make it amenable to accept the compounding ingredients necessary to improve the properties of the final product.
>
> Fischer specifically discloses that the mastication efficacy of certain peptisers is further improved by the incorporation of certain chemicals which will act as cocatalysts or boosters along with the peptisers, thereby making the mastication process more economical and more energy efficient.
>
> However, neither Fischer nor the other cited references disclose or fairly suggest the presently recited compounding and properties and belt layer formation as set forth in the present claims. Accordingly, withdrawal of these rejections is requested."

The claimed belt layer formation is however suggested by GB '426 and applicant has not specifically disputed this. Further, it is again submitted that the claimed compounding would have been obvious in view of the cited secondary references. The patent to Fischer was not relied upon for the basic compounding or process teachings but rather merely was *optionally* applied as exemplary further evidence that the ordinary artisan would have understood that it is desirable to have a low viscosity to improve processibility of a rubber mixture during extrusion (col. 1, lines 13-26). The rejections are therefore still considered proper.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/
Primary Examiner, Art Unit 1791

G. Knable
March 17, 2008